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Burnout and coping among certified athletic trainers in two high school settings

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BURNOUT AND COPING AMONG CERTIFIED ATHLETIC TRAINERS IN TWO HIGH SCHOOL SETTINGS

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By

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ABSTRACT

BURNOUT AND COPING AMONG CERTIFIED ATHLETIC TRAINERS

IN TWO HIGH SCHOOL SETTINGS

By Alise M. McBrien, ATC

The purpose of this study was to compare the rate of burnout between high school certified athletic trainers (ATCs) and high school/clinic ATCs in the United States. This study also sought to determine the relationship between burnout levels and coping responses for the participants. Forty-two females and 39 males participated by completing the Maslach Burnout Inventory (MBI), Ways of Coping Questionnaire (WCQ), and a demographic questionnaire. Results indicated the majority of participants experienced low levels of burnout in the depersonalization (DP) and personal accomplishment (PA) subscales and high levels in the emotional exhaustion (EE) subscale. In addition, both high school and high school/clinic ATCs were currently utilizing coping skills within the four subscales analyzed from the WCQ to a small degree. Significant relationships were noted between: 1) age and DP and PA subscales, 2) number of years certified and DP, and 3) number of hours worked per week and PA.

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CHAPTER ONE

INTRODUCTION

Stress is a common phenomenon in today's fast pace society. According to Gieck (1984), people of all occupations experience stress, however, those who work in helping professions are more susceptible to stress. The helping professionals are considered to involve individuals who spend considerable time in intense involvement with other people who are in need of aid (Jackson, Schwab & Schuler, 1986; Maslach, Jackson & Leiter, 1996). In addition, Gieck defines stress as the individual's physical and emotional reaction to demands placed on that individual. Lastly, the American Psychological Association describes chronic stress as "unrelenting demands and pressures for seemingly interminable periods of time" (Hutman, Jaffe, Segal, Larson & Dumke, 2005, Chronic Stress section, ¶ 1). For individuals working continuously with people under such circumstances, chronic stress can be emotionally draining and can lead to burnout (Maslach et al., 1996).

Research has established burnout to be directly related to stress (Balogun, Titiloye, Balogun, Oyeyemi & Katz, 2002; Gieck, J., 1984; Kelley, Eklund & Ritter-Taylor, 1999). Burnout is defined as "uncontrollable, negatively perceived events occurring over a period of time that lead to three negative psychological responses: emotional exhaustion, depersonalization, and a lack of personal accomplishment" (Hendrix, Acevedo & Hebert, 2000, p. 139). According to Smith (1984), burnout is viewed as a reaction to chronic stress. The characteristics of burnout are physical, mental, and behavioral and all help

create complex negative interactions between environmental and personal characteristics (Smith, 1984).

The main attribute of burnout is "a psychological and emotional withdrawal from a formerly sought-after or enjoyable activity" (Smith, 1984, p.115). Those who suffer from burnout complain of a decrease in energy, chronic fatigue, and an increase in the susceptibility to illness. Emotional characteristics consist of feelings of depression, helplessness, and anger (Smith, 1984). These characteristics result in decreased efficiency at the individual's job and inconsistent performance results. Service providers report feeling drained and feel they are unable to give of themselves anymore; they cope by decreasing the interaction with the recipients and adopt a negative attitude toward their job and subsequently towards the recipients (Balogun et al., 2002). According to Maslach and Jackson (1981a, 1981b, 1986, 1996), burnout consists of three components: emotional exhaustion (tired and fatigued feeling), depersonalization (indifferent feelings about helping others), and personal accomplishment (how they contribute to those around them). The three components are measured using the Maslach Burnout Inventory (MBI) developed by Maslach and Jackson in 1981.

Burnout is a multidimensional syndrome that affects those who work in the helping professions, including nurses, doctors, teachers, coaches, and physical therapists, in which day to day interpersonal interaction is an essential aspect of their work (Maslach & Jackson, 1986). Burnout is common among individuals working in the helping professions due to their continuous personal interaction with the people (Balogun et al., 2002; Kahn, 1993; Sarmiento, Laschinger & Iwasiw, 2004). Professionals working

closely with people, as in the helping professions, report feeling drained and unable to give of themselves anymore. As a result, they decrease client contact and eventually adopt a negative attitude toward their job and their clients (Balogun et al., 2002).

There is an array of employment opportunities within the helping professions, including athletic training. Athletic training is known as the field concerned with the health, care and safety of the athlete (Arnheim & Prentice, 2000). According to Gieck, Brown and Shank (1982) and Gieck (1984), athletic trainers are under an exceptional amount of stress and many athletic trainers, if not all, experience some level of burnout.

Within the last 10 years, research in the field of athletic training has shifted toward studying burnout based on previous findings from studies in the 1980's. For example, a study by Campbell, Miller and Robinson (1985) determined that 60.3% of the 221 athletic trainers studied were classified as "burned out". A study by Capel (1986) determined that 66% of the 332 athletic trainers who participated in the study experienced a medium level of burnout, while 34% experienced a low level of burnout at the time of the study. Lastly, a qualitative study by Reed and Giacobbi (2004) studied stress and coping responses of BOC certified graduate athletic training students. Researchers indicated that among high rates of stress, two of the six participants decided to leave the profession of athletic training entirely; excessive stress and burnout appeared to be the two main factors for leaving.

The high prevalence of job transfers, and even career changes as exemplified in the study by Reed and Giacobbi (2004), may cause people to wonder why there is such a high turnover within the helping professions, especially within athletic training.

DiGiacomo and Adamson (2001), state that because helping professionals contend with an extreme number of stressors and challenges at one time, the helping professionals must be equipped with coping skills that will permit them to overcome, tolerate, or minimize the negative aspects of the stressful situations that are inherent to their careers. A study by Reed and Giacobbi (2004), suggests many BOC certified athletic trainers (ATCs) had difficulty dealing with the many challenges of working with high school athletes and were struggling due to their inability to cope. The inability to cope with stressful situations, especially work related, can have several negative consequences including burnout and/or job turnover (DiGiacomo & Adamson, 2001). Professionals suffering from burnout may present with both physiological and psychological disturbances that will most likely have a negative affect on the individual's work, which could result in neglect of care a treatment of the people the individual is supposed to help (Gieck et al., 1982).

A number of studies have been performed regarding burnout of athletic trainers within the college setting (Belle, 2001; Dingle, 2002; Hendrix et al., 2000), and limited studies have been completed pertaining to athletic trainers within the high school setting. Baker (2004) studied factors affecting burnout among high school ATCs in the state of California. Baker determined the participants were experiencing moderate levels of burnout within all three subscales of the MBI. The results of Baker's study reveal the need for further investigation of burnout within the high school setting. Several ATCs have even greater workloads as many are contracted out through a clinic to work at several high schools at one time. Research is lacking in regards to burnout rates of

individuals contracted through clinics to work at multiple high schools; therefore, this study sought to compare the burnout rates of ATCs working at high schools to those working at both high schools and clinics within the entire United States. Due to the challenging demands with previously studied high school ATCs, this study also sought to determine the relationship of burnout levels to each individual's coping strategies.

Statement of Purpose

The primary purpose of this study was to compare the rate of burnout of high school ATCs to ATCs working at a high school and clinic (high school/clinic ATCs). In addition, this study sought to determine the relationship of burnout level to individual coping responses.

Null Hypotheses

1. There will be no difference between high school ATCs and high school/clinic ATCs in regards to Emotional Exhaustion scores on the Maslach Burnout Inventory.
2. There will be no difference between high school ATCs and high school/clinic ATCs in regards to Depersonalization scores on the Maslach Burnout Inventory.
3. There will be no difference between high school ATCs and high school/clinic ATCs in regards to Personal Accomplishment scores on the Maslach Burnout Inventory.
4. There will be no difference between high school ATCs and high school/clinic ATCs in regards to overall scores on the Maslach Burnout Inventory.

5. There will be no relationship between burnout levels and individual coping responses.

Limitations

This study was limited by:

1. The return rate of the questionnaires.
2. The participants' willingness to honestly answer the questionnaires.
3. The possibility that those who are "burned out" may not return the questionnaires and therefore, the study may result in an underestimated amount of burnout among the two population groups.

Delimitations

This study was delimited to:

1. High school BOC certified athletic trainers in all 50 United States of America.
2. High school/clinic BOC certified athletic trainers in 50 United States of America.
3. Burnout as measured by the Maslach Burnout Inventory (Maslach & Jackson, 1986).
4. Coping as measured by the Ways of Coping Questionnaire (Folkman & Lazarus, 1988b).

Definitions

Athletic Training. Recognized by the American Medical Association as an allied health care profession. Athletic training is known as the field concerned with the health, care, and safety of the athlete (Arnheim & Prentice, 2000).

BOC Certified Athletic Trainer (ATC). "A unique health care provider who specializes in the prevention, assessment, treatment, and rehabilitation of injuries and illnesses that occur to athletes and the physically active" (*Learn more*, n.d., ¶ 2).

Burnout. "Uncontrollable, negatively perceived events occurring over a period of time that lead to three negative psychological responses: emotional exhaustion, depersonalization, and a lack of personal accomplishment" (Hendrix et al., 2000, p. 139).

Coping. Relentlessly changing cognitive and behavioral efforts to manage specific demands that are considered to be taxing or exceeding the resources of the individual (Lazarus & Folkman, 1984).

Helping Professions. Jobs in which professional individuals spend considerable time in intense involvement with other people who are in need of aid (Jackson, Schwab & Schuler, 1986; Maslach et al., 1996).

High School ATC. A BOC certified athletic trainer working a minimum of 30 hours per week in a high school setting in which the job description relates entirely to athletic training.

High School/Clinic ATC. A BOC certified athletic trainer working 10-20 hours per week at a physical therapy or sports medicine clinic, who is contracted out through that clinic to work at a high school(s) a minimum of 15 hours per week.

Summary

Burnout has been linked directly to stress. Burnout is defined as "uncontrollable, negatively perceived events occurring over a period of time that lead to three negative psychological responses: emotional exhaustion, depersonalization, and a lack of personal

accomplishment" (Maslach & Jackson, 1986). Numerous studies (Abel & Sewell, 1999; Gieck, 1984; Kelley, 1994) suggest that those working in the helping professions are subject to burnout due to their work load and constant interactions with people. Athletic trainers are one of those helping professions in which there is significant burnout. ATCs spend many hours helping and giving to others around them (athletes) on a daily basis. According to Arnheim and Prentice (2000), the very nature of the athletic training profession is one of caring about and serving the athlete. However, burnout may occur when the emotional demands of work overcome the athletic trainer's ability to cope (Arnheim & Prentice, 2000). High school ATCs appear to be at a high risk for burnout due to several factors such as the number of athletes the ATC works with and the number of hours the ATC works (Baker, 2004). Several ATCs have even greater workloads as many are contracted out through a clinic to work at several high schools at one time. Therefore, this study first, compared the burnout rates among high school ATCs and high school/clinic ATCs in the United States by looking at the results of the three subscales of the MBI; and secondly, sought to determine if a relationship is present between burnout rates and an individual's ability to cope.

CHAPTER TWO

REVIEW OF LITERATURE

The purpose of this study was to compare the burnout rates of high school ATCs to high school/clinic ATCs within the United States to gain a better understanding of the prevalence of burnout within the field of athletic training. In addition, this study sought to determine the relationship of burnout levels to coping responses. Chapter two contains a review of the literature related to burnout and is divided into ten sections: (a) an introduction; (b) definitions and models of burnout; (c) helping professions; (d) teachers; (e) nursing educators; (f) therapists; (g) BOC certified athletic trainers; (h) collegiate ATCs; (i) high school ATCs; and (j) coping responses. The review of literature will be followed by a brief summary.

The prevalence of burnout is more common than most people know, especially within the helping professions. Burnout is a syndrome caused by uncontrollable negatively perceived events occurring over a period of time that lead to three negative psychological responses: emotional exhaustion, depersonalization, and a lack of personal accomplishment (Maslach & Jackson, 1986). Burnout not only affects the individual, but also affects the workplace and interaction between the provider and the recipients. Service providers report feeling drained and feel they are unable to give of themselves anymore; they cope by decreasing the interaction with the recipients and adopt a negative attitude toward their job and subsequently towards the recipients (Balogun et al., 2002). Some examples of helping professionals that have been ascertained to have a high level of burnout include doctors, nurses, teachers, and therapists.

Burnout Definitions and Models

Burnout has been defined in a variety of different ways (Daley, 1979; Maslach & Jackson, 1981a, 1981b; Sarmiento et al., 2004; Smith, 1984). For the purpose of this paper burnout is defined as "uncontrollable, negatively perceived events occurring over a period of time that lead to three negative psychological responses: emotional exhaustion, depersonalization, and a lack of personal accomplishment" (Maslach & Jackson, 1986).

Burnout has been directly related to chronic stress (Smith, 1984, 1986). Smith states that both stress and burnout result from interactions among situational factors, cognitive or mental responses, physiologic events, and coping behaviors. A conceptual model showing the dynamics and relationships between stress and burnout is presented in Figure 1 (Smith, 1986). The major focus of the model is that it encompasses relationships

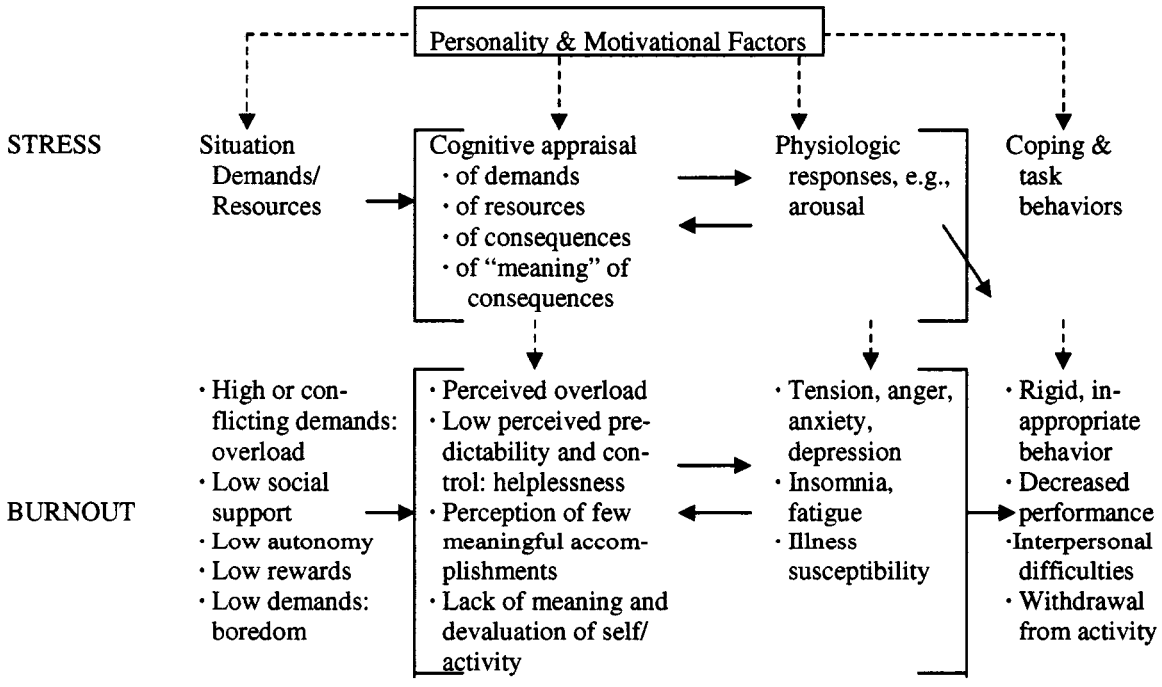

Figure 1. "Conceptual model of stress and burnout" (Smith, 1986)

among the situation, physiologic arousal responses, and behavioral responses to the situation; which are all influenced by the individual's personality and motivational characteristics.

Gieck, Brown, and Shank (1982), state that burnout is the result of overworking under stressful conditions. Excessive demands on an individual's time and mind cause a gradual reduction in that individual's ability to be productive at work. Some physiological indicators of burnout include increased pulse rate, shortness of breath, headaches, neuromuscular disorders, gastrointestinal or cardiovascular disturbances, and fatigue (Gieck et al., 1982). Burnout also causes psychological symptoms such as anxiety, depression, insomnia, and the inability to handle stress (Gieck et al., 1982). The symptoms of burnout will most likely have a negative affect on the individual's work, which could result in neglect of care a treatment of the people the individual is supposed to help. The effects of burnout could be detrimental to athletes at the high school level if the athletic trainer is having a lack of concern for the health and safety of the athlete. Therefore, future research should focus on the effects an ATC with burnout syndrome has on the athletes under that individual's care.

Burnout in the Helping Professions

According to Gieck (1984), people of all occupations experience stress, however, those who work in helping professions are more susceptible to stress. Another name for those who work in the helping professions is "caregivers". Kahn (1993) defined caregiving organizations as institutions, such as hospitals, schools, churches, and social service agencies that serve their client populations via personal relationships between

caregivers and care-seekers. Caregivers give of themselves emotionally, as well as physically and intellectually, when working with care-seekers. Therefore, caregivers risk being emotionally drained, giving of themselves until they are unable to give anymore which leads to burnout (Kahn, 1993). When studying caregiving organizations, Kahn found that to minimize the risk of burnout, the goal of these organizations should be to create networks of supportive relationships that best serve the organizations to focus on nurturing the caregivers so that they can give care to others. Teaching, nursing, and athletic training are some professions that fall under the caregiving or helping profession category. Individuals who work in these professions are at risk for burnout due to their constant care of care-seekers and should thus find ways to reduce the risk of burnout.

Teachers and Burnout

A few studies have reported high levels of stress and burnout in school teachers (Abel & Sewell, 1999; Kelley & Gill, 1993). The consequences of burnout in school teachers typically result in diminished job satisfaction, reduced teacher-pupil rapport and pupil motivation, and decreased teacher effectiveness in meeting educational goals (Kyriacou & Sutcliffe, 1978). When studying stress and burnout amongst urban and rural school teachers, Abel and Sewell found that time pressure and poor working conditions were the best predictors of burnout for rural school teachers. Similar to teachers, ATCs are constantly placed under time pressure and poor working conditions. The athletic trainer often has to deal with a high number of athletes to care for, the expectations of coaches to return an injured athlete to action in a timely manner, difficulties in caring for chronic conditions, and personality conflicts involving athletes, coaches, physicians, or

administrators which are all problems that cause the ATC to be physically and emotionally drained by the end of the day (Arnheim & Prentice, 2000).

Nursing Education and Burnout

Nurses, nurse educators, and nursing students have been suffering from burnout for decades, which could possibly explain the high attrition rate associated with nursing (Deary, Watson & Hogston, 2003). Schmitz, Neumann, and Oppermann (2000), state that greater work-related stress and burnout in nurses are observed to be related to a diminished locus of control. Deary et al. (2003) state, however, that stress in qualified nurses is often different from stress experienced by nursing students. Nursing students generally have the stress of adjusting to a new life style, leaving home or school, and in addition to their clinical work, nursing students have to study and pass examinations. Jones and Johnson (1997) identified a significant increase in levels of stress among nursing students when compared to levels of stress experienced by senior medical students and the general population.

In addition to nursing students, nurse educators have been found to be at risk for burnout due to the considerable number of hours they spend with nursing students who need help acquiring knowledge, critical judgment, and psychomotor skills (Sarmiento et al., 2004). Fong (1990) states that nurse educators are responsible for many roles and tasks in their caregiving organization and they often work an average of 59 hours per week. In a study by Sarmiento et al. (2004), nursing educators reported a low job satisfaction and limited opportunities for promotion. The nursing educators identified

difficult assignments, administrative attitudes, multiple job dimensions and pay as the main sources of their stress.

Therapists and Burnout

Physical therapists (PTs) and occupational therapists (OTs) are prime candidates for burnout resulting from the fact that their clinical roles are demanding and require close interaction with their clients (Balogun et al., 2002). A study by Schuster, Nelson and Quisling (1984) determined that 53% (n=160) of PTs surveyed experienced burnout. Burnout can be detrimental to both the therapist and their patients as burnout typically results with a negative attitude towards the individual's clients. Balogun et al. studied the prevalence of burnout in 169 PTs and 138 OTs in New York City. Balogun et al. reported that 58% (n=179) of the therapists studied (n=308) were emotionally exhausted, 94% (n=287) had negative feelings about their work and their clients, and only 1% (n=4) were satisfied with their personal accomplishments. The results from this study revealed a significantly higher level of burnout in PTs and OTs compared to other studies within the helping professions (Balogun et al., 2002).

BOC Certified Athletic Trainers and Burnout

The athletic training profession has evolved over the years to play a major role in the health care of the physically active. According to Arnheim and Prentice (2000), an athletic trainer is concerned with the well-being of the athlete and generally assumes the responsibility for overseeing the total health care for the athlete. Thus, an athletic trainer typically takes the athlete's health concerns upon himself/herself which could result in emotional exhaustion. The ATC is most directly responsible for all phases of health care

in an athletic environment, including the prevention of injuries, providing initial first aid and injury management, evaluating injuries, and designing and supervising a timely and effective rehabilitation program for the safe and expeditious return of the athlete to full activity (Arnheim & Prentice, 2000). Arnheim and Prentice state that the athletic trainer must be knowledgeable and competent in a variety of specialties encompassed within the breadth of sports medicine. Perhaps the broad scope of practice is one explanation for the high levels of burnout within the field of athletic training.

Multiple studies have concluded that all athletic trainers are affected by burnout (Campbell et al., 1985; Gieck, 1984; Gieck et al., 1982). Many ATCs deal with poor relationships with athletes, coaches, and administrators that leads to a sense of frustration and ultimately results in an increase in burnout (Gieck, 1984). Also adding to increases in burnout are personal attributes and characteristics typically found in ATCs. Gieck states that the athletic trainer's classic work style is over-dedication and over-commitment, thus resulting in greater levels of burnout due to the long hours athletic trainers typically work.

Tanaka (2001) studied factors affecting the levels of perceived burnout on ATCs in California. The study determined that all 120 participants had low to moderate levels of burnout in all three subscales of the MBI. The results also revealed that the most experienced group had the highest scores for emotional exhaustion and depersonalization. This study shows that even those who have worked in the field of athletic training for many years are still affected by burnout.

Collegiate BOC Certified Athletic Trainers and Burnout

A study by Hendrix, Acevedo and Hebert (2000) claimed that Smith's theoretical model of stress and burnout was supportive of the examination of burnout in NCAA Division I athletic trainers. In their study of 118 ATCs working at NCAA Division-IA universities, Hendrix et al. (2000) found that perceived stress was a significant predictor of emotional exhaustion (EE). Emotional exhaustion has consistently been reported as a primary factor in assessing burnout due to feelings of despair, isolation, exhaustion, and being overwhelmed.

Additionally, Belle (2001) studied the perceived workloads of NCAA Division II BOC certified athletic trainers. Belle found that Division II college/university athletic training staffs were most likely significantly outnumbered by athletes and were therefore over-worked, over-stressed and underpaid. Resulting from 91 returned surveys, Belle concluded that as the athletic trainer's resources - personnel, capital, financial - were stretched, the quality of rendered care to their athletes became compromised. Therefore, these collegiate athletic trainers reported that their workload (leading to stress and burnout) decreased the quality of care they were able to provide.

High School BOC Certified Athletic Trainers and Burnout

The high school athletic trainer provides on-site emergency health care and coordinates the school's athletic health care program (Arnheim & Prentice, 2000). The athletic trainer also assumes the important role as a liaison to the team physician, athletes, coaches, administration, and parents. Baker (2004) examined the factors affecting burnout among high school ATCs in California. The MBI was completed by 103 ATCs

working at a high school at the time of the study. The results of Baker's study indicated that ATCs working in the high school setting experienced moderate levels of burnout across all three subscales of the MBI. Baker also found a significant relationship between the number of hours the ATC worked and the burnout score within the personal accomplishment subscale. The results of Baker's study indicate that high school ATCs may experience greater levels of burnout when compared to studies on ATCs in settings other than the high school.

Coping Responses

The concept of coping has been important in the field of psychology for well over 40 years (Lazarus & Folkman, 1991). Despite the rich history with coping, however, there is little coherence in theory, research, and understanding (Lazarus & Folkman, 1991). For the sake of this study coping referred to the individual's ability to constantly change, both cognitively and behaviorally, as a means to manage specific demands or stressors that may be seen as exceeding the resources of that person (derived from Lazarus & Folkman, 1984). Coping has been conceptualized as a process rather than as a reaction to a stressor. In other words, coping consists of the range of purposeful responses to stress, from appraisal of the situation to management of the stress via purposeful responses (Gould, Finch & Jackson, 1993). DiGiacomo and Adamson (2001) suggest that the inability to cope with work stress (within health professions specifically) can have several negative consequences such as burnout and/or turnover.

Similar to burnout, problems with coping can be recognized throughout the helping professions as well. Rijk, Le Blanc, Schaufeli and Jonge (1998), state that intensive care

nurses have heavy workloads and extensive responsibilities, but possess only limited authority and therefore, minimal job-control. They must care for unstable patients, perform accurate routines, react with extreme urgency and work with sophisticated technology. However, Rijk, et al. emphasize that their level of job control is often insufficient in order to cope efficiently, effectively and hastily with these strong demands. In other words, if these nurses had more control over their jobs, they may be able to cope more effectively and thus would decrease the amount of burnout prevalent in that profession.

When studying the coping strategies of ATCs in Indiana, Dingle (2002) determined that females were more likely to talk to a friend and read, while males between the ages of 24 to 34 were more likely to us alcohol. This data suggests that there is a definite difference between the coping responses of males and females. In addition, there can be both positive and negative coping responses, as suggested by the results of the study.

The health psychology literature suggests that there is a growing consensus that coping strategies play an important role in the effectiveness of an individual's response to stressors and ultimately burnout (Billings & Moos, 1981). Due to the amount of burnout in the field of athletic training (Baker, 2004; Campbell et al., 1985; Capel, 1986; Hendrix et al., 2000; Tanaka, 2001) coping responses of athletic trainers should be studied in order to help decrease the amount of burnout. Unfortunately, previous recommendations in the athletic training literature for alleviating burnout appear to be based on the findings from either the other helping professions, the intuitions of experienced athletic trainers, or both (Reed & Giacobbi, 2004). According to Reed and Giacobbi, relatively few authors

have empirically investigated the sources of stress and coping responses that are experienced by practicing ATCs. The lack of research on coping responses of ATCs could be the "missing link" in understanding the reason for levels of burnout in practicing ATCs. Hence, there was an obvious need to incorporate the investigation of coping responses within this current study.

Summary

Burnout is prevalent in all occupations, but is ascertained to be significantly higher in those who work within the helping professions (Gieck 1984; Kahn, 1993). Amongst those helping professions are teachers, nurses, doctors, therapists, and athletic trainers. Recent studies regarding burnout in the field of athletic training have discovered that athletic trainers may be more vulnerable to burnout due to common characteristics amongst athletic trainers such as over dedication and over commitment to the athletes under their care (Gieck, 1984).

Baker's (2004) study of high school athletic trainers in California discovered high school ATCs to have a moderate level of burnout across all three subscales of the MBI. However, no research was found regarding high school ATCs who are contracted out through physical therapy or sports medicine clinics. High school/clinic ATCs are often contracted to work at multiple high schools within the same season. Therefore, the primary purpose of this study was to compare the burnout rates of high school ATCs versus high school/clinic ATCs. In addition, many studies have found that the inability to cope with stressors eventually leads to burnout and/or job turnover. Thus, the secondary

purpose of this study was to determine the relationship of burnout levels to coping responses.

CHAPTER THREE

METHODS

The purpose of this study was to compare the rate of burnout of high school ATCs to high school/clinic ATCs within the United States. In addition, this study also sought to determine the relationship of burnout levels to individual coping responses. Chapter three includes five major sections: (a) sample selection; (b) variables; (c) instrumentation; (d) data collection/procedures; and (e) statistical design. This chapter ends with a brief summary of the information provided.

Sample Selection

Participants consisted of 400 ATCs, both male and female (200 high school ATCs and 200 high school/clinic ATCs). The National Athletic Trainers Association (NATA) was asked to provide a list of 200 ATCs randomly selected across the United States from each of the two job settings (200 high school only and 200 high school/clinic). Approval from the Human Subjects-Institutional Review Board of San Jose State University (see Appendix A) was acquired prior to mailing the questionnaire packets to the randomly selected participants. The packets consisted of a cover letter and consent form (see Appendix B) explaining the research to the participants. The questionnaire packets were mailed to all 400 participants (n=400). Statistical analyses were performed only on those packets that were returned fully completed.

Variables

Independent Variable

The independent variable for this study was the type of setting, high school versus high school/clinic, in which the ATCs work.

Dependent Variables

The dependent variables in this study consisted of burnout as measured by the MBI (Maslach & Jackson, 1981b, 1986). Emotional exhaustion, depersonalization and personal accomplishment are the three variables that constitute the three subscales of burnout. In addition, the eight subscales of coping were also dependent variables as measured by the eight subscales of the Ways of Coping Questionnaire (WCQ) (Folkman & Lazarus, 1988b). Confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape-avoidance, planful problem solving and positive reappraisal are the eight variables that constitute the eight subscales of coping.

Instrumentation

The three dependent variables (emotional exhaustion, depersonalization and personal accomplishment) were measured by the MBI (see Appendix C). The MBI was developed by Maslach and Jackson (1981b, 1986) and is comprised of 22 questions. The questions are divided into three independent subscales of burnout: 1) emotional exhaustion, 2) depersonalization, and 3) personal accomplishment. Emotional exhaustion (EE), illustrates feelings of being emotionally overextended and exhausted by work (Hendrix et al., 2000). The second subscale is depersonalization (DP), which describes a loss of concern for the people a person is working with and an impersonal, uncaring response

towards them. Lastly, personal accomplishment (PA), defines the feelings of accomplishment and a sense of competence about a person's job and a sense of self-appreciation for the successes he/she has achieved. Those experiencing burnout often have an increased feeling of emotional exhaustion and depersonalization and a decreased feeling of personal accomplishment (Hendrix et al., 2000). A high score on the EE and DP subscales and a low score in the PA subscale indicate a high degree of burnout (Maslach & Jackson, 1981b, 1986).

The MBI contains nine questions in regards to EE, five questions regarding DP, and eight questions pertaining to PA. Scoring of the MBI is fulfilled by calculating each subscale individually according to the participants' answers to the questions based on a 0-6 scale of frequency (0=never and 6=everyday). The frequency numbers are added and burnout is assessed as high, moderate, or low based upon the individual's score in each subscale. Participants who score greater than 27 on the EE subscale are classified as high; 26 to 17, as moderate; and less than 16, as low. Depersonalization scores greater than 13 are classified as high; 12 to 7, as moderate; and less than six, as low. Lastly, PA is scored opposite EE and DP, meaning that a high score in PA represents a low level of burnout. Thus, PA scores of 31 or less are classified as high; 32 to 38, as moderate; and greater than 39, as low (Baker, 2004).

The MBI is a widely known and accepted instrument used to test burnout in the helping professions. The MBI has specifically been used on numerous occasions to measure burnout among athletic trainers (Baker, 2004; Capel, 1986; Hendrix et al., 2000; Tanaka, 2001). A copy of the MBI could not be placed into the appendix as the

instrument is under copyright and cannot be duplicated. However, two sample questions contained in the MBI can be found in Appendix C.

The initial study by Maslach and Jackson (1981a) discovered that the MBI's internal consistency using the Cronbach coefficient alpha was strong (r = .83 [frequency] and .84 [intensity]). For the emotional exhaustion subscale, r = .89 for frequency and .86 for intensity. In the depersonalization subscale, r = .59 for frequency and .57 for intensity. The personal accomplishment subscale yielded, r = .77 for frequency and .72 for intensity. The MBI's internal consistency, test-retest reliability, and validity have been established and documented in previous research (Baker, 2004; Capel, 1986; Tanaka, 2001).

The other dependent variable, coping responses, was measured by the Ways of Coping Questionnaire (see Appendix D). The Ways of Coping Questionnaire (WCQ) was developed by Folkman and Lazarus in 1980. However, according to Folkman (as cited in Scherer, Hwang, Yan, & Li, 2000) the questionnaire has been revised from its original format, the "Ways of Coping Checklist," to incorporate a Likert-type response format, remove redundant and unclear items, and to add new items that reflect the full range of coping. The revised 66-item Questionnaire retains the broad range of cognitive and behavioral strategies that comprised the survey. The questions are divided into eight independent subscales of coping: 1) confrontive coping, 2) distancing, 3) self-controlling, 4) seeking social support, 5) accepting responsibility, 6) escape-avoidance, 7) planful problem solving, and 8) positive reappraisal.

Confrontive coping (CC) refers to aggressive efforts used to alter the situation and suggests some degree of hostility and risk-taking. The second subscale, distancing (DT), describes a person's cognitive efforts to detach oneself and to diminish the significance of the situation. Self-controlling (SC) refers to one's efforts to regulate feelings and actions. The fourth subscale, seeking social support (SSS), refers to one's efforts to seek informational support, tangible support, and emotional support. The fifth subscale, accepting responsibility (AR), describes one's acknowledgement of his or her role in the problem with an affiliated theme of trying to make things right. Escape-avoidance (EA) refers to one's wishful thinking and behavioral efforts to escape or avoid the problem. Planful problem solving (PPS) is the deliberate problem-focused efforts to alter the situation, coupled with an analytic approach to solving the problem. Lastly, positive reappraisal (PR) refers to the efforts undertaken by the individual to create positive meaning by focusing on personal growth. This subscale also has a religious dimension (Folkman & Lazarus, 1988a).

Scoring of the WCQ can be completed by using either raw scores or relative scores. For raw scoring, add the raw score for each item on the scale to get a total score. Four possible responses exist on a zero to three scale of frequency (0=does not apply or not used, 3=used a great deal). Raw scores describe the coping effort for each of the eight subscales of coping; thus, a high raw score indicates that the individual often uses the behaviors described by that scale when coping with the stressful event. Secondly, relative scores describe the proportion of effort represented for each type of coping, and are expressed as a percentage ranging from 0 to 100. A high relative score on a particular

subscale indicates that the individual used those coping behaviors more often than other behaviors. The raw scoring method was used in this study to score and analyze the levels of coping for each subscale as well as determining the average for each subscale to coincide with the 0-3 frequency scale.

The WCQ is the most widely known and used instrument in studies that measure individual coping responses, though many may argue that good reliability and validity have not been established. Edwards and O'Neill (1998) suggest that although scores on the PR and PPS yielded reliabilities greater than .70, the reliabilities for the six remaining subscales were marginal to poor. However, Folkman and Lazarus (1988a) argue that traditional test-retest estimates of reliability are inappropriate for this questionnaire because the coping processes are variable by definition. Folkman and Lazarus continue that reliability can be evaluated by examining the internal consistency of the coping measures, estimated with Cronbach's coefficient alpha. The alpha coefficients for the eight scales are higher than the alphas reported for most other measures of coping processes (CC=.70, DT=.61, SC=.70, SSS=.76, AR=.66, EA=.72, PPS=.68, and PR=.79). In addition, the items on the WCQ have face validity because the strategies described are those that individuals have reported using to cope with the demands of stressful situations. Construct validity is also found in the WCQ due to the fact that the results of previous studies by Folkman and Lazarus are consistent with their theoretical predictions (Folkman & Lazarus, 1988a).

The demographic questionnaire (see Appendix E) consists of questions pertaining to the age and gender of the participants. Questions regarding the work and career

development include the number of years the individual has been BOC certified, the number of years working at his/her current location, their current position, other positions they have worked and the number of years in those positions, the number of ATCs at their current location, the number of athletes under their care, the number of hours they work at the high school(s) per week, and the number of hours they work at the clinic per week (for high school/clinic ATCs).

Data Collection/Procedures

Participants consisted of ATCs working in the high school setting or the high school/clinic setting throughout the United States. The National Athletic Trainers Association (NATA) provided a randomly selected list of potential participants' names and addresses; 200 participants (400 total) from each of the two job settings. Approval from the Human Subjects-Institutional Review Board of San Jose State University (see Appendix A) was acquired prior to mailing the questionnaire packets to the randomly selected participants. The packets consisted of a cover letter and consent form (see Appendix B) explaining the research, the Maslach Burnout Inventory (see Appendix C), the Ways of Coping Questionnaire (see Appendix D), a demographic questionnaire (see Appendix E), and a self-addressed stamped envelope. The participants were asked to the complete the packet and mail it back within 3 weeks. To maintain confidentiality and increase the response rate of the participants, a reminder postcard was mailed out 1 week prior to the due date (see Appendix F). Participants were informed that their responses would remain anonymous. Participants who are interested were allowed to request the results of the study from the researcher upon completion of the study.

Statistical Analysis

Statistical analysis of the data primarily consisted of the use of descriptive statistics for the demographic information. Descriptive statistics such as means, standard deviations, standard errors of the mean, frequencies and percentages were used to examine burnout rates in regards to each participant's demographic information (i.e. hours worked, number of athletes the ATC works with, number of years BOC certified). A Multivariate Analysis of Variance (MANOVA) between the subscales of burnout, the subscales of coping and multiple variables was used to determine significant relationships between the multiple variables. In addition, Pearson's product moment coefficient of correlation was used between all linear data to observe correlations between the variables.

Summary

High school ATCs and high school/clinic ATCs in the United States were studied to compare the burnout rates and study the coping responses of the two population groups. The MBI was used to assess burnout levels amongst the ATCs due to its well established validity and reliability. The WCQ was used to obtain coping response data for each of the two populations groups. A demographic questionnaire was also used to obtain information that may affect burnout levels. Descriptive statistics were used to analyze the mean, standard deviations, frequencies, and percentages of the participants' demographic information. A MANOVA was used to analyze the relationship in the three subscales of burnout, the subscales of coping, and multiple variables between the two population groups. Lastly, correlations were used between the eight subscales of coping and the three subscales of burnout, as well as all the linear demographic data.

CHAPTER FOUR

RESULTS AND DISCUSSION

The purpose of this study was two-fold. The first purpose was to compare the level of burnout among ATCs working in the high school setting only and ATCs working in both a medical/healthcare clinic and high school(s) (high school/clinic ATC) within the United States. Multiple factors were assessed to determine possible correlations to burnout levels including gender, age, number of years they have been BOC certified, number of high schools they worked as an ATC, the type of current position they worked in, the number of athletes they worked with, and number of hours worked per week in all settings. The Maslach Burnout Inventory (MBI) (Maslach & Jackson, 1986) was used to determine burnout scores for three subscales: emotional exhaustion (EE), depersonalization (DP), and personal accomplishment (PA).

The second purpose was to determine the relationship between burnout levels and individual coping responses. The Ways of Coping Questionnaire (WCQ) (Folkman & Lazarus, 1988b) was used to determine coping scores for eight subscales of coping: confrontive coping (CC), distancing (DT), self-controlling (SC), seeking social support (SSS), accepting responsibility (AR), escape-avoidance (EA), planful problem solving (PPS), and positive reappraisal (PA). Though the WCQ contains eight subscales, the four subscales (DT, SSS, EA, and PPS) most relevant to the study were used for statistical analyses to determine coping for ATCs. Chapter Four provides the statistical results obtained by performing descriptive data analysis, frequency distributions for multiple variables, a MANOVA, and Pearson's product moment correlation coefficient on the

three subscales of burnout as measured by the MBI and the four subscales of coping as measured by the WCQ. Lastly, chapter four concludes with a discussion of the results.

Participants, Results, and Discussion

Demographics

Four hundred questionnaire packets were mailed to high school ATCs (n=200) and high school/clinic ATCs (n=200) randomly selected by the NATA throughout all 50 United States during mid-football season. The time of mailing was specifically chosen to obtain data from ATCs who were potentially beginning to experience burnout but were not too burned out to complete the questionnaires. A reminder postcard was mailed to all 400 ATCs 2 weeks after mailing out the questionnaire packets. One-hundred and four (104) packets were returned (26% return rate), and 81 were usable (78% usable rate). Twenty-three packets were not usable because they were not fully completed or because the participant was no longer a practicing athletic trainer. The return rate was comparable to that of Tanaka (2001) who had a return rate of about 24 percent. Of the 81 respondents 52 % were female (n=42) and 48% were male (n=39). The mean age of the participants was 34 years, ranging from 23 – 55 years (see Table 1).

The operational definitions of high school and high school/clinic ATC from chapter one were changed after reviewing the collected data. For the purpose of statistical analysis and discussion a participant was considered to be a high school ATC if his/her working hours were spent in the high school setting, with less than 5 hours spent in another setting (i.e. clinic). Consequentially, a participant was considered to be a high school/clinic ATC if he/she worked a minimum of 5 hours in the clinic setting while the

remainder was spent in the high school setting. The definition was changed after the data was collected to accurately encompass and better represent the variety of hours that were presented by the participants. Of the 81 participants, 60.5% were classified as high school ATCs (n=49) and 39.5% were classified as high school/clinic ATCs (n=32). Within the high school population (n=49) 51% were female (n=25) and 49% were male (n=24). The average age of the high school population was 36.0 years, ranging from 24 - 55 years. Of the 32 high school/clinic ATCs, 53% were female (n=17) and 47% were male (n=15). The average age of the high school/clinic ATC population was 30.8 years, ranging from 23 - 44 years.

Years BOC Certified

The mean number of years as an ATC overall was higher (9.9 ± 6.9 years) in this study when compared to Baker (2004), whose participants had a mean value of 7.6 years as a BOC certified athletic trainer. ATCs in the high school population were certified an average of 11.2 ± 7.6 years, while those in the high school/clinic were certified an average of 8.0 ± 5.2 years. The average number of years at the main current job setting was 6.6 ± 6.3 years for the overall population, which is slightly higher than Baker's study, who found ATCs to be in their current job an average of 5.4 years. Within the high school population, participants were in their main current job an average of 7.5 ± 7.2 years, whereas the high school/clinic participants were in their main current job on average of 5.3 ± 4.3 years (see Table 1).

Table 1.

Background Information for High School and High School/Clinic ATCs (n=81)

Variables	Mean	SE	Sd	Range	n	%
Age	33.94	.85	7.62	23-55		
Gender						
Male					39	48.1
Female					42	51.9
N of yrs as ATC	9.88	.77	6.90	1-32		
N of high schools						
1 high school					77	95.1
2 high schools					3	3.7
4 high schools					1	1.2
Yrs at current position	6.63	.70	6.27	0.17-32		
Type of current position						
High School (n=81):						
Head ATC					73	90.1
Assistant ATC					6	7.4
Other					2	2.5
Clinic (n=32):						
ATC					19	59.4
Manager PT services					3	9.3
Rehab Technician					1	3.1
Coordinator Sports Med.					2	6.3
Owner					2	6.3
Director of Sport Med.					2	6.3
PT Aid					3	9.3
N of Athletes	325.25	33.70	303.23	20-2300		
N of total hours/week	45.57	1.78	16.05	4-80		

Number of High Schools

The majority of the total participants (95.1%, n=77) worked solely at one high school. The remaining participants worked at either two high schools (3.7%, n=3) or four high schools (1.2%, n=1). Three of the four participants who worked at more than one high school were found in the high school/clinic group. The fact that three of the four participants working at multiple high schools were from the high school/clinic sample was expected. ATCs who work at both the high school and the healthcare clinic are often paid through the clinic and contracted out to several high schools within the local area. No previous research was found to provide numerical data on how many ATCs actually work at multiple sites. Thus, this study helped to provide baseline data in this area in hopes to forge the way for future research.

Type of Position

Similar to Baker's (2004) study, the results of the present study indicated that the majority (90.1%, n=73) of ATCs worked as the head athletic trainer in their main high school position. In Baker's study 89.3% were head ATCs, 4.9% were assistant ATCs, and 5.8% were grouped in the "other" category. The data from the present study indicated that 90.1% of the participants were head ATCs, six participants (7.4%) were assistant ATCs and two participants (2.5%) were grouped in the "other" classification. Participants in the high school/clinic population were categorized additionally into a variety of clinic positions. The clinical positions consisted of: ATC, Manager of Physical Therapy Services, Rehabilitation Technician, Coordinator of Sport Medicine Services, Owner, Director of Sport Medicine, and Physical Therapy Aid. The majority (59%,

n=19) of the 32 high school/clinic participants worked as ATCs in the clinical setting (see Table 1).

Number of Athletes

The mean number of total athletes the ATCs have at their high school site(s) is 325 ± 303. The fact that one per diem ATC only worked with 20 athletes and one ATC at a large high school worked with 2300 athletes may have caused some skewness of the burnout results. When these two participants were removed, the range of athletes was 30 – 1000 with a mean of 304 ± 207 athletes; greatly changing the standard deviation but only decreasing the mean number of athletes by 21. When analyzing the data for all 81 participants, those ATCs working at the high school only reported working with a mean of 314 athletes, while those working at the high school and clinic reported working with a mean of 342 athletes. The higher number of athletes in the high school/clinic sample group is expected due to the fact that three of the participants work at multiple high schools and thus work with a greater number of athletes.

Number of Hours

The participants for this study worked a mean total (high school and clinic) hours of 45.6 ± 16.0 hours per week (4 hrs – 80 hrs) in their positions The average hours worked per week for the overall population is higher than those found in Baker's (2004) study with a mean total of 37.8 hours per week. Thirty-three percent of the total population worked 40 hours per week or less in their positions, while 67% reported working more than 40 hours per week. These results are opposite of those found in Baker's study, which reported 61% of the total population worked 40 hours per week or less while 39%

of the participants worked more than 40 hours per week. The specific contrast could be due to the continued promotion of the athletic training profession, and thus resulting in a greater awareness of the necessity for full-time athletic trainers. In the current study high school ATCs worked a mean of 44.1 ± 20.0 hours per week solely in the high school setting. In contrast, high school/clinic ATCs worked a mean of 28.5 ± 9.3 hours per week in the high school setting and a mean of 19.8 ± 10.2 hours per week in the clinic setting. Therefore, high school ATCs worked a total average of 44.1 ± 20.0 hours per week, while the high school/clinic ATCs worked a total average of 47.8 ± 6.4 hours per week. Sixty-seven percent of the overall sample reported working more than 40 hours per week.

Levels of Perceived Burnout

The majority of participants were identified as being in the low category for the depersonalization (DP) and personal accomplishment (PA) subscales of burnout, and in the high category for emotional exhaustion (EE) (see Table 2). However, the mean levels of perceived burnout for each of the three subscales of the MBI for the overall population (n=81) were found to be in the moderate category. A study by Sarmiento et al. (2004) revealed nurse educators experienced similar levels of burnout. The study by Sarmiento et al. indicated moderate levels of burnout in all three subscales of the MBI, with a higher burnout level in the EE subscale when compared to the DP and PA subscales. In the current study the mean scores for EE, DP, and PA were 22.2 ± 10.6, 7.3 ± 5.4, and 38.4 ± 6.0 respectively. Though several ATCs experienced a high level of burnout, especially in the EE subscale (38%, n=31), and the majority of participants were in the low category

for DP (54%, n=44) and PA (64%, n=52), the mean value for the total population in all three subscales was moderate burnout.

Results of the current study were comparable to Baker's (2004) study who identified the majority of the participants as in the low category for all three subscales of burnout (EE=35.9%, DP=54.4%, PA=55.3%) but presented an overall mean score in the moderate category across all three subscales of burnout. Results for Baker's study revealed mean scores for EE, DP, and PA as: 20.87 ± 10.28, 7.48 ± 5.33, and 37.99 ± 6.62; which fall in the moderate category of burnout. Similarly, Tanaka (2001) indicated the majority of participants within the sample of ATCs had low levels of burnout across all three subscales. Thus, the results of the present study indicated that the overall mean burnout levels have continued to stay at the moderate level across all three subscales in high school ATCs not only in California (such as in Baker's study), but across the United States. In addition, the majority of ATCs studied have continued to stay in the low category for both DP and PA; however, this study revealed the majority of participants were in the high category for the EE subscale of burnout. High scores in the EE subscale could in part be due to the long hours the ATCs are working in the high school positions, as seen in this study; which leads to feelings of being emotionally overextended and exhausted by work (Hendrix et al., 2000).

The mean levels of perceived burnout for each of the three subscales were fairly comparable between high school ATCs and high school/clinic ATCs. The mean scores for the high school population (n=49) were: EE = 22.9 ± 10.7, DP = 7.5 ± 6.0, and PA = 37.8 ± 6.4. Thus, the mean burnout levels for high school ATCs were in the moderate

category of burnout on all three subscales. The mean scores for the high school/clinic population (n=32) were: EE = 21.0 ± 10.4, DP = 6.9 ± 4.5, and PA = 39.4 ± 5.4. Therefore, the mean burnout levels for high school/clinic ATCs were in the moderate category for EE, but were in the low category for both DP and PA, though not by a large margin (see category ranges in Table 2). In summary, the numerical data for the two population groups is similar; however, a very slight difference in the categorical data exists for the DP and PA subscales of burnout between the two population groups.

Table 2.

Levels of Perceived Burnout Combined Across Groups (n=81)

Subscale	Low	Moderate	High
Emotional Exhaustion			
Subscale range	0 – 16	17 – 26	27 or more
Frequency	28	22	31
Percentage	34.6	27.1	38.3
Depersonalization			
Subscale range	0 – 6	7 – 12	13 or more
Frequency	44	23	14
Percentage	54.3	28.4	17.3
Personal Accomplishment			
Subscale range	39 or more	32 – 38	0 – 31
Frequency	52	16	13
Percentage	64.2	19.8	16.0

Twenty-eight participants (35%) scored in the low category in the EE subscale, 15 high school ATCs and 13 high school/clinic ATCs. Twenty-two participants (27%) scored in the moderate category of EE, 14 high school ATCs and eight high school/clinic

ATCs. Lastly, 31 participants (38%) scored in the high category of EE, 20 high school ATCs and 11 high school/clinic ATCs. Upon examining the overall frequencies within the three subscales, a higher degree of burnout was exhibited in the EE subscale when compared to DP and PA. These results are similar to Baker's (2004) study which identified a higher level of burnout in the EE subscale for the population when compared to the other two subscales. A study by Hendrix et al. (2000) concluded that doctors, mental health staff, and teachers had higher scores of emotional exhaustion than athletic trainers; though a high level was still noted in ATCs. Hendrix et al. noted that those who scored high in EE were more likely to avoid people and perceived them with a greater negative attitude over time.

Forty-four participants (54.3%) scored in the low category in the DP subscale, 25 high school ATCs and 19 high school/clinic ATCs. Twenty-three participants (28.4%) scored in the moderate category of DP, 15 high school ATCs and eight high school/clinic ATCs. Lastly, 14 participants (17.3%) scored in the high category of DP, nine high school ATCs and five high school/clinic ATCs. The findings in this study indicated that the majority (54.3%) of the 81 participants experienced low levels of depersonalization. The low DP scores for the current study were consistent with the findings in Baker's (2004) study and Tanaka's (2001) study which indicate that 54.4% and 62% of the participants experienced low levels of DP. The low DP scores within the present study indicated that age, number of years BOC certified, number of high school sites, number of athletes, and number of total hours worked per week had very little affect on the ATCs' attitude toward the athletes. In contrast, Hendrix et al.'s (2000) study indicated that ATCs

appeared to score higher in the DP subscale of burnout, more so than teachers, doctors, and nurses. The researchers suggested the higher level of DP may occur due to the number of athletes ATCs are in contact with daily, the number of hours ATCs work, and the various professional relationships involved in the occupation. However, based upon the results of the present study and those found in Baker's study, other factors may need to be considered as possible causes to the high levels of perceived burnout.

Personal accomplishment scores are interpreted inversely, meaning that high PA scores are related to a low level of burnout among participants. Fifty-two participants (64%) scored in the low category in the PA subscale, 26 high school ATCs and 26 high school/clinic ATCs. Sixteen participants (20%) scored in the moderate category of PA, 15 high school ATCs and one high school/clinic ATC. Lastly, 13 participants (16.0%) scored high in the PA subscale, eight high school ATCs and five high school/clinic ATCs. Thus, the data indicated that the majority (64%) of the total participants (n=81) experienced low levels of burnout within the PA subscale. Thirteen of the 81 participants (16.0%) were categorized as experiencing low levels of PA, which is indicative of high levels of burnout. Low levels of PA are associated with feelings of low success within the profession of athletic training and decreased feelings of competence for the ATC (Baker, 2004). Therefore, the fact that the majority of participants in the current study had low levels of burnout within the PA subscale indicated that the high school and high school/clinic participants had high feelings of success and competence within their profession.

In contrast to the findings of the present study, Balogun et al. (2002) indicated that physical therapists (PTs) and occupational therapists (OTs) experienced low feelings of personal accomplishment at greater levels than those found in other helping professions. The contrast in results may be due to the inability of PTs and OTs to see their patients' return to activity after they have been released from care, whereas ATCs are able to observe their patients' return to full participation. Therefore, ATCs often experience high feelings of success within their profession.

Levels of Coping

The WCQ measured coping on eight different subscales. For the purpose of this study four of the eight subscales were used for statistical analysis in order to decrease the number of variables and increase statistical power. The four coping subscales: distancing (DT), seeking social support (SSS), escape-avoidance (EA), and planful problem solving (PPS), were selected as most applicable to athletic training based upon the subscale descriptions provided by Folkman and Lazarus (1988a). Unlike the MBI, the WCQ did not provide categories of low, moderate, or high for scoring; thus, the average score of each subscale was calculated and the resulting scores were used categorically in reference to the Likert scale of the questionnaire (0=does not apply, 1=used somewhat, 2=used quite a bit, 3=used a great deal). The higher the average score, the more that subscale of coping was utilized by the participant to manage problem situations.

The mean values of coping for each of the four subscales of the WCQ for the overall population (n=81) were found to be in the "used somewhat" category (i.e. scores were between .50 and 1.4). The mean scores for DT, SSS, EA, and PPS were .90 ± .50, 1.30 ±

.64, .61 ± .50, and 1.37 ± .56 respectively (see Table 3 for coping categories and frequencies). The mean levels of coping for each of the four subscales were fairly comparable between high school ATCs and high school/clinic ATCs. The mean scores for the high school population (n=49) were: DT = .94 ± .50, SSS = 1.32 ± .64, EA = .62 ± .45, and PPS = 1.40 ± .59. Thus, the mean coping levels for high school ATCs were found to be in the "used somewhat" category. The mean scores for the high school/clinic population (n=32) were: DT = .85 ± .54, SSS = 1.26 ± .65, EA = .60 ± .57, and PPS = 1.40 ± .52. Therefore, the mean coping scores for high school/clinic ATCs were also found to be in the "used somewhat" category. In summary, there does not appear to be a difference between the two sample groups in regards to coping levels.

Twelve participants (15%) from the total population presented with mean scores in the "does not apply" category in the DT subscale of coping, five high school ATCs and seven high school/clinic ATCs. Fifty-six participants (69%) scored in the "used somewhat" category of DT, 38 high school ATCs and 18 high school/clinic ATCs. Thirteen participants (16%) scored in the "used quite a bit" category of DT, six high school ATCs and seven high school/clinic ATCs. No participants were found to have mean scores in the "used a great deal" category of DT. Therefore, the majority of participants appeared to use distancing coping strategies to a small degree, such as detaching themselves from the situation to minimize the significant affect of the situation, but not with great frequency.

Table 3.

Levels of Coping Among High School and High School/Clinic ATCs (n=81)

Subscale	**0** (0-0.4)	**1** (.5-1.4)	**2** (1.5-2.4)	**3** (2.5-3)
Distancing (DT)				
Frequency	12	56	13	0
Percentage	14.8	69.2	16.0	0
Seeking Social Support (SSS)				
Frequency	10	36	34	1
Percentage	12.3	44.5	42.0	1.2
Escape-Avoidance (EA)				
Frequency	32	44	5	0
Percentage	39.5	54.3	6.2	0
Planful Problem Solving (PPS)				
Frequency	3	40	37	1
Percentage	3.7	49.4	45.7	1.2

Ten participants (12.3%) presented with scores in the "does not apply" category for SSS, seven high school ATCs and three high school/clinic ATCs. Thirty-six participants (44.5%) had mean coping scores in the "used somewhat" category of SSS, 21 high school ATCs and 15 high school/clinic ATCs. Thirty-four participants (42%) had mean scores in the "used quite a bit" category of SSS, 21 high school ATCs and 13 high school/clinic ATCs. Lastly, one participant (1.2%), who was found in the high school/clinic population, had a mean score in the "used a great deal" category of SSS. However, no participants from the high school sample group had mean scores in the last category for SSS. The majority of participants (n=36, 44.5%) used coping strategies in the seeking social support subscale to a small degree. Numerous studies (Gieck, 1984; Gieck et al.,

1982; Smith, 1984, 1986) have implicated the importance for athletic trainers to maintain a good social support system and separate themselves from their work. Thus, the participants in this study utilized an informational, tangible, or emotional support system to help cope with the stressors of their profession. The ability to separate work from one's personal life is essential to allow an ATC the opportunity to release stress, which enables him/her to continue working with minimal burnout.

In the EA subscale, 32 participants (39.5%) from the overall population had mean scores in the "does not apply" category, 16 were high school ATCs and 16 were high school/clinic ATCs. Forty-four participants (54.3%) had mean scores in the "used somewhat" category of EA, 30 high school ATCs and 14 high school/clinic ATCs. Five participants (6.2%) presented with mean scores in the "used quite a bit" category of EA, three high school ATCs and two high school/clinic ATCs. No participants were noted to have mean scores in the "used a great deal" category for the EA subscale of coping. The majority of the participants appeared to use escape-avoidance coping mechanisms very little, if at all. Thus, the data suggests that these participants infrequently tried to avoid the situation altogether. Reed and Giacobbi (2004) suggested that graduate athletic training students who utilized escape-avoidance techniques ignored a situation altogether in hopes that the situation would simply disappear. Therefore, when compared to the study by Reed and Giacobbi, the participants in the present study appeared to deal with the situation rather than avoid it.

In the final subscale of coping, three participants (4%) had mean scores in the "does not apply" category for PPS, two from the high school sample group and one from the

high school/clinic sample group. Forty participants (49%) were found to have mean scores in the "used somewhat" category of PPS, 23 high school ATCs and 17 high school/clinic ATCs. Thirty-seven participants (46%) had mean scores in the "used quite a bit" category of PPS, 23 high school ATCs and 14 high school/clinic ATCs. One participant (1%) had a mean score in the "used a great deal" category of PPS from the high school sample group, no participants from the high school/clinic group had mean scores in this last category for PPS. Therefore, the majority of the participants in this study used planful problem solving strategies, such as analyzing the situation and then actively trying to solve the problem, quite often to help decrease stressors and cope with the situation.

In summary, the majority of participants (69.2%) appeared to use coping strategies for the DT subscale, such as detaching themselves from the situation to minimize the significant affect of the situation a number of times, but not very often. Based upon the data, it appears that the majority of participants will sometimes distance themselves from the situation or detach themselves from it altogether in hopes to minimize its impact. The majority of participants used coping strategies in the SSS subscale quite often by utilizing an informational, tangible, or emotional support system to help cope with the stressors of their profession. In addition, EA coping mechanisms were used little, which suggests that these participants dealt with the situation rather than avoided the situation. Lastly, planful problem solving strategies, such as analyzing the situation and then actively trying to solve the problem, were used quite often by the majority of the participants to help decrease stressors and cope with the situation. Overall, the results indicated that

participants sometimes utilized coping techniques that fell within the four subscales to help decrease stressors. However, the four remaining subscales (confrontive coping, self-controlling, accepting responsibility, and positive reappraisal) may have revealed different results if they were included in the analyses of coping and burnout. Therefore, the remaining four subscales of coping should be included in future research to determine their relationship to burnout in the field of athletic training.

Multivariate Analysis of Variance

Results of the Multivariate Analysis of Variance (MANOVA) indicated a significant relationship was present between the age of the ATC and DP ($F=10.7$, $p<.04$), as well as age and PA ($F=8.4$, $p<.05$), see Table 4. The results indicated that the older the ATC, the higher the level of burnout present in the DP and PA subscales. The relationship between age and the DP and PA subscales may be explained in that over time ATCs become more distant from their work and withdraw from their athletes, and thus a lower sense of accomplishment and ability to perform their work occurs. This relationship may lead to a higher level of burnout; however, the reasoning behind the relationship remains unclear and should be a focus of future research.

In addition, a significant relationship was present ($F=11.4$, $p<.04$) between years as a BOC certified athletic trainer and burnout within the DP subscale. Results indicated that the longer an ATC has been certified the higher the level of depersonalization present. These findings may be related to the age of the ATC. The older the individual, the more likely he/she has been certified for a longer period of time. As mentioned previously, age had a significant relationship with burnout in the DP subscale ($F=10.7$, $p<.04$), thus years

BOC certified also had a significant relationship with the DP subscale of burnout. These results differ from those presented by Baker (2004) in which no significant relationship was established between years as an ATC, number of athletic teams, and the number of

Table 4.

Multivariate Analysis of Variance for Burnout and Coping Subscales (n=81)

	Dependent Variable	Mean Square	F	Sig.
Age of ATC	EE Score	18.443	.217	.947
	DP Score	62.421	10.701	.039*
	PA Score	49.088	8.415	.054
	DT Score	10.993	1.319	.443
	SSS Score	9.982	1.815	.334
	EA Score	16.803	.548	.757
	PPS Score	9.277	2.141	.284
# of Years as an ATC	EE Score	87.033	1.024	.527
	DP Score	66.633	11.423	.036*
	PA Score	22.833	3.914	.145
	DT Score	3.800	.456	.793
	SSS Score	16.900	3.073	.192
	EA Score	17.033	.555	.736
	PPS Score	23.333	5.385	.098
# of Hours worked in High School(s) per week	EE Score	93.833	.774	.606
	DP Score	29.000	11.600	.080
	PA Score	58.833	23.533	.041*
	DT Score	6.091	1.406	.438
	SSS Score	9.468	1.385	.443
	EA Score	28.685	3.073	.193
	PPS Score	9.207	2.125	.292

*Significant at the $p<.05$ level.

athletes with the three subscales of burnout. The cause of this difference is unclear, but could be partly due to the fact that the participants in Baker's study had a smaller range for both number of years BOC certified and number of athletes, possibly leading to insignificant results. Therefore, these results should be further researched to determine if years BOC certified is, in fact, a consistent factor relating to burnout.

Lastly, results of the MANOVA were indicative of a significant relationship between weekly hours worked at the high school(s) and burnout within the PA subscale ($F=23.5$, $p<.04$). Similar results were found by Baker (2004) whose results indicated a significant relationship was present between the number of hours worked per week at the high school and burnout within the PA subscale. A possible explanation for this relationship is present in Gieck et al.'s (1982) study in which they noted that the more hours an ATC works, the more an excessive demand is placed on the ATC's time and mind which leads to a gradual deterioration of the ATC's ability to be productive and gives them a lower sense of accomplishment at work. Though a significant relationship was present between high school hours per week and the PA subscale of burnout in the current study, no relationship was indicated between clinic hours or high school plus clinic hours for any of the three subscales of burnout. Suggestions for the lack of significant relationships between clinic hours and total weekly hours (high school + clinic) and any of the three burnout subscales were absent as previous research has not been found for clinic ATCs. In theory the more hours worked by an ATC (high school + clinic) the higher the level of burnout; however, the current results of the MANOVA did not indicate a significant relationship between those variables. The lack of significant relationship between these

variables could in part be due to the variety in number of hours that were present in both population groups, which may have lead to a weaker power between these variables.

There were no significant relationships present between total hours worked per week (high school only, clinic only, or high school + clinic), age, or years BOC certified within the four subscales of coping ($p<.05$). Thus, the results of the MANOVA indicated that the ATC's ability to cope was not related to the variables that resulted in a significant relationship for two of the burnout subscales. In addition, no significant relationship was established between age and EE, years as an ATC and EE and PA, and between hours worked per week at the high school(s) and EE and DP. Similar to Baker's (2004) study, the number of hours worked per week at the high school had no direct relationship with the ATC's physiological and psychological strain (EE), nor was the number of hours worked per week at the high school relative to the ATC's development of negative attitudes towards the athletes they worked with (DP). Capel (1986) found higher levels of burnout were related to a greater number of hours worked by ATCs. The number of hours worked was an indicator of burnout in the past, however, more recent studies indicated that hours worked did not appear to be related to levels of burnout.

Lastly, no significant relationship ($p<.05$) was present between the population setting (high school and high school/clinic) and any of the four subscales of coping or the three subscales of burnout. Therefore, the results suggest that the occupational setting is not related to burnout, nor is it related to the ATC's ability to cope with stressors. The data indicated that comparable levels of burnout across all three subscales and coping across

all four subscales were present between the high school ATCs and the high school/clinic ATCs.

Though significant relationships were present between age of the ATC and DP and PA, number of years BOC certified and DP, and between hours worked per week at the high school and the PA subscale of burnout; the results of the MANOVA were based upon a low power due to the number of participants included in this present study. As stated previously, the study included 81 participants (n=81), both male and female from two job settings. Due to the large number of variables analyzed in this study, a larger sample size would have been helpful in providing a higher power for statistical analysis.

Correlations

Pearson's product moment coefficient of correlation (r) indicate that a positive correlation exists between the DP subscale of burnout and mean scores for both distancing and escape-avoidance subscales of coping (r=.315 and r=.266), see Table 5. The correlation indicated that higher levels of burnout within the DP subscale were associated with higher uses of coping strategies within the DT and EA subscales. In other words, when an ATC is distancing himself/herself from the situation or trying to avoid the stressful situation he/she is creating a negative attitude toward those involved in the situation (depersonalization).

Table 5.

Perceived Levels of Burnout and Levels of Coping Among High School and High School/Clinic ATCs and Pearson's Product Moment Coefficient of Correlation

	EE Score	DP Score	PA Score
Mean Score for DT			
r	.175	.315**	-.087
r^2	.031	.099	.007
n	81	81	81
Mean Score for SSS			
r	.053	.080	-.014
r^2	.003	.006	.0002
n	81	81	81
Mean Score for EA			
r	.389**	.266*	-.111
r^2	.151	.071	.012
n	81	81	81
Mean Score for PPS			
r	.002	.173	-.005
r^2	.000004	.030	.000025
n	81	81	81

** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

In addition, a positive correlation was present between the EE subscale of burnout and the mean score of the EA subscale of coping (r=.389). The correlation between EE and

EA indicated that the ATC with the higher burnout level of emotional exhaustion would more likely avoid the stressful situation (EA) rather than deal with the situation. Characteristics of EE include feelings of being emotionally overextended and exhausted by work. Therefore, one suffering from EE would most likely use escape-avoidance techniques of coping to minimize the stress by pulling away from the situation.

Conclusion

A major finding for the current study was that the majority of participants experienced low levels of burnout in both the DP and PA subscales and experienced a high level of burnout within the EE subscale. Both the high school ATCs and high school/clinic ATCs experienced moderate levels of burnout according to the overall mean scores across all three subscales at the time of the questionnaire. Findings in this study were comparable to those found in the study by Baker (2004). Baker studied perceived levels of burnout in high school ATCs within the state of California. The results of Baker's study revealed that the majority of participants experienced low levels of burnout in all three subscales of burnout; however, the mean burnout levels for the participants were in the moderate category for each of the three subscales of burnout. In addition, Hendrix et al. (2000) identified that Division 1-A University ATCs also experienced moderate levels of burnout across all three subscales of burnout at the time of the study.

A Multivariate Analysis of Variance between the four coping subscales, three burnout subscales, and the variables of age, number of years BOC certified, and total hours worked per week in the high school revealed significant relationships, despite the lower power present resulting from the small population (n=81). The significant relationships

from the MANOVA are as follows: 1) age of the ATC and both DP and PA subscales of burnout, 2) number of years BOC certified and the DP subscale of burnout, and 3) number of hours worked per week at the high school and the PA subscale of burnout. No significant relationship ($p<.05$) was present between the population setting and any of the four subscales of coping or the three subscales of burnout. Therefore, the results indicated that the occupational setting (high school or high school/clinic) at the high school level is not related to burnout nor is it related to the ATC's ability to cope with stressors.

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

Persons working within the helping professions including teachers, nursing educators, therapists, and athletic trainers, experience levels of burnout across all three subscales of burnout, which include emotional exhaustion, depersonalization, and personal accomplishment (Abel & Sewell, 1999; Baker, 2004; Balogun et al., 2002; Campbell et al., 1985; Gieck, 1984; Gieck et al., 1982; Hendrix et al., 2000; Kelley & Gill, 1993; Sarmiento et al., 2004; Tanaka, 2001). Maslach and Jackson (1981a) state that people working within the helping professions may experience higher levels of burnout than those in other professions due to their constant interaction with individuals (patients/athletes) on a daily basis. In addition, many studies have suggested that proper coping techniques would help to decrease levels of burnout (Deary et al., 2003; DiGiacomo & Adamson, 1990; Gieck, 1984; Gieck et al., 1982; Hendrix et al., 2000; Smith, 1984); though limited research has been found to determine the relationship of coping and burnout within the helping professions. Chapter four presented and discussed the results of the data obtained in this study. Chapter five provides a summary of the results, as well as conclusions, implications for future studies, and recommendations for addressing burnout among high school ATCs and high school/clinic ATCs.

Summary

The first purpose of the study was to compare the level of burnout among two different groups of high school ATCs (high school only versus high school/clinic) within the United States. The second purpose was to determine the relationship between

burnout levels and levels of coping responses. Multiple factors were assessed to determine relations in levels of perceived burnout including gender, age, number of years BOC certified, number of high schools they worked as an ATC, the type of position worked, the number of athletes they worked with, and number of hours worked per week in all settings, as well as the MBI. The WCQ was used to analyze levels of coping. Though data is calculated for eight subscales on the WCQ, four subscales (DT, SSS, EA and PPS) were used for statistical analyses to determine coping strategies for ATCs. One hundred-four participants returned the questionnaire packets, 81 participants (females = 42, males = 39) fully completed their questionnaire packets including the MBI, WCQ, and demographic questionnaire with implied consent, resulting in a return rate of 26 percent and a usable rate of 78 percent.

A thorough review of the literature revealed that a study examining burnout among high school/clinic ATCs had not been conducted. In addition, limited studies have been conducted to determine the relationship of coping skills and burnout levels among high school and high school/clinic athletic training settings. Descriptive data and frequency distributions were performed for the three subscales of burnout as measured by the MBI and the four subscales of coping as measured by the WCQ.

Results of data analyses revealed that the two sample groups experienced moderate levels of burnout, according to the mean scores, on all three subscales at the time of the study. Though the majority of the overall participants were identified in the low category for both the DP and PA subscales of burnout, and the high category for the subscale of EE, the mean overall scores indicated that participants suffered from burnout at the

moderate level within all three subscales. In addition, the results also revealed that all participants utilized the four subscales of coping strategies on the "used somewhat" level. The results of the MANOVA revealed significant relationships between age and both DP and PA subscales of burnout, years BOC certified and the DP subscale of burnout, and between the number of high school hours worked per week and the PA subscale of burnout. These results were important because they indicated that older ATCs and those who worked increased hours per week in the high school setting were more likely to experience burnout. However, no significant relationships were noted between burnout levels and the type of athletic training setting; thus, burnout is a potential problem to ATCs in both the high school and high school/clinic settings. Pearson's product moment correlation coefficient revealed a significant positive correlation between the DP subscale of burnout and the use of coping strategies within the DT and EA subscales. In addition, a positive correlation was present between the EE subscale of burnout and the mean score of the EA subscale of coping. In other words, the higher the burnout in EE and DP, the more the use of coping within DT and EA. These results were difficult to explain. In theory, the more an individual utilizes a coping skill, the less amount of burnout he/she should experience because they are able to deal and cope with the stressful situation. Therefore, the positive correlation between the two subscales of burnout (EE and DP) and the two coping subscales (DT and EA) should be further researched.

Though the participants experienced moderate levels of burnout across all three subscales at the time of the study based upon the overall mean scores of the burnout subscales, the majority of participants experienced low levels of burnout in the DP and

PA subscales and a high level of burnout within the EE subscale. Overall the participants experienced the highest level of burnout within the EE subscale, indicating high levels of physiological and psychological strain among 38.3 percent (n=31) of the high school and high school/clinic ATCs. Therefore, future studies should focus on the EE subscale of burnout as a possible overall cause of burnout among ATCs. In addition, the majority of participants (69.2%) appeared to use coping strategies within the DT subscale occasionally. The participants utilized coping skills to the "used somewhat" level in the remaining three subscales of SSS (44.5%, n=36), EA (54.3%, n=44), and PPS (49.4%, n=40). Future studies should focus on how to better utilize coping techniques and determine if there is a difference in burnout levels after coping techniques have been implemented.

Lastly, it is important to discuss the possibility that the truly "burned out" population may have been under-represented, and thus may have affected the results of the current study. One major problem with investigating burnout, especially when using a questionnaire, is that those persons who are already suffering from burnout will not participate in the study due to the stress they are already under. Therefore, the low levels of burnout (for DP and PA) may have resulted from a misrepresentation of the "highly burned out" ATCs within the high school and high school/clinic job settings.

Conclusions

The following conclusions were established based upon the results of this study.

1. High school and high school/clinic ATCs are currently experiencing low levels of burnout within the DP and PA subscales, and a high level of burnout within the EE subscale.
2. High school and high school/clinic ATCs are currently utilizing coping skills to a small degree within the four subscales analyzed from the WCQ.
3. The age of high school and high school/clinic ATCs has a direct relationship to increased levels of perceived burnout within the DP and PA subscales.
4. The number of years high school and high school/clinic athletic trainers have been BOC certified has a direct relationship with increased levels of burnout in the DP subscale.
5. The number of hours worked per week at the high school has a direct relationship to levels of burnout within the PA subscale.
6. The type of job setting (high school versus high school/clinic) has no relationship to levels of perceived burnout and coping strategies.
7. The four subscales of coping have poor correlation to the level of perceived burnout on the three subscales.

Recommendations for Future Research

The following recommendations were established based on the results of this study.

1. Examine the reliability of the MBI for use in studying the athletic training profession as no significant correlations were present between the three subscales.

2. Examine different types of coping questionnaires within the same population group. The small response rate could be a resultant of the long WCQ questionnaire and the limited time ATCs have to complete such types of questionnaires.
3. Examine the four remaining subscales of coping from the WCQ that were not analyzed in the current study, in relation to burnout in ATCs.
4. Examine the difference in burnout levels between full-time high school ATCs, full-time clinical ATCs, and high school/clinic ATCs as different hours worked (i.e., high school hours, clinic hours, and high school + clinic hours) had different results within this study.
5. Examine if there is a difference in burnout levels of ATCs after implementing a burnout awareness segment into athletic training education programs, specifically focusing on problems related to emotional exhaustion (EE) due to the high rate of burnout found in this study within the EE subscale.
6. Examine differences in burnout and coping abilities throughout different seasons and different times of the year.
7. Examine if years BOC certified is a consistent factor leading to burnout.

Implications for Athletic Training Education Programs and Government Mandates

1. Athletic training education programs should incorporate a stress management course or seminar prior to graduating from an undergraduate program.
2. Athletic training education programs should incorporate an organizational and administrative course to teach athletic trainers how to handle the administrative

side of being a BOC certified athletic trainer (including how to keep up with paperwork, inventory, how to deal with insurance companies, and legal issues).

3. Athletic training education programs should emphasize ways to cope with stressful situations in order to prepare the undergraduate students for entering the profession and assist them in being successful.
4. Government affiliations and professional organizations, such as the NATA and NCAA, should implement rules and regulations limiting the number of hours ATCs are allowed to work (i.e., 40 hours/week) and should mandate a set athlete to athletic trainer ratio in the hope to decrease burnout levels within the profession.
5. BOC athletic trainers should focus on implementing personal stress management skills to help decrease the risk of burnout. In addition, ATCs should also limit the number of hours they work per week to help minimize stressors placed upon them during work and thus decrease levels of perceived burnout.

References

Abel, M.H., & Sewell, J. (1999). Stress and burnout in rural and urban secondary school teachers. *The Journal of Educational Research, 92,* 287-297.

Arnheim, D.D., & Prentice, W.E. (2000). *Principles of athletic training* (10th ed.). New York: McGraw Hill.

Baker, N.L. (2004). *Factors affecting burnout among high school certified athletic trainers.* Unpublished master's thesis, San Jose State University, San Jose, CA.

Balogun, J.A., Titiloye, V., Balogun, A., Oyeyemi, A., & Katz, J. (2002). Prevalence of determinants of burnout among physical and occupational therapists. *Journal of Allied Health, 31,* 131-140.

Belle, S.E. (2001). *Perceived workloads of National Collegiate Athletic Association Division II certified athletic trainers.* Unpublished master's thesis, University of North Carolina, Chapel Hill, NC.

Billings, A.G., & Moos, R.H. (1981). The role of coping responses and social resources in attenuating the stress of life events. *Journal of Behavioral Medicine, 4,* 139-157.

Campbell, D., Miller, M.H., & Robinson, W.W. (1985). The prevalence of burnout among athletic trainers. *Journal of Athletic Training, 20,* 110-113.

Capel, S.A. (1986). Psychological and organizational factors related to burnout in athletic trainers. *Research Quarterly for Exercise and Sport, 57,* 321-328.

Daley, M.R. (1979). "Burnout": Smoldering problem in protective services. *Social Work, 1,* 375-379.

Deary, I.J., Watson, R., & Hogston, R. (2003). A longitudinal cohort study of burnout and attrition in nursing students. *Journal of Advanced Nursing, 43,* 71-81.

DiGiacomo, M., & Adamson, B. (2001). Coping with stress in the workplace: Implications for new health professionals. *Allied Health, 30,* 106-111.

Dingle, C.R. (2002). Perceived causes of occupational stress and coping strategies among athletic trainers in Indiana. Unpublished doctoral dissertation, Indiana University, Bloomington.

Edwards, J.R., & O'Neill, R.M. (1998). The construct validity of scores on the Ways of Coping Questionnaire: Confirmatory analysis of alternative factor structures. *Educational and Psychological Measurement, 58,* 955-965.

Folkman, S., & Lazarus, R.S. (1988a). *Ways of Coping Questionnaire Manual* (Research ed.). Redwood City, CA: Consulting Psychologists Press.

Folkman, S., & Lazarus, R.S. (1988b). *Ways of Coping Questionnaire.* Redwood City, CA: Consulting Psychologists Press.

Fong, C. (1990). Role overload, social support, and burnout among nursing educators. *Journal of Nursing Education, 29,* 102-108.

Gieck, J. (1984). Stress management and the athletic trainer. *Journal of Athletic Training, 19,* 115-119.

Gieck, J., Brown, R.S., & Shank, R.H. (1982). The burnout syndrome among athletic trainers. *Journal of Athletic Training, 17,* 36-40.

Gould, D., Finch, L.M., & Jackson, S.A. (1993). Coping strategies used by national champion figure skaters. *Research Quarterly for Exercise and Sport, 64,* 453-469.

Hendrix, A.E., Acevedo, E.O., & Hebert, E. (2000). An examination of stress and burnout in certified athletic trainers at Division 1-A universities. *Journal of Athletic Training, 35,* 139-144.

Hutman, S., Jaffe, J., Segal, R., Larson, H., & Dumke, L.F. (2005). *Stress: signs and symptoms, causes and effects.* Retrieved January 21, 2006, from http://www.helpguide.org/mental/stress_signs.htm

Jones, M.C., & Johnson, D.W. (1997). Distress, stress and coping in first-year student nurses. *Journal of Advanced Nursing, 26,* 475-482.

Kahn, W.A. (1993). Caring for the caregivers: patterns of organizational caregiving. *Administrative Science Quarterly, 38,* 539-564.

Kelley, B.C. (1994). A model of stress and burnout in collegiate coaches: Effects of gender and time of season. *Research Quarterly for Exercise and Sport, 65,* 48-59.

Kelley, B.C., Eklund, R.C., & Ritter-Taylor, M. (1999). Stress and burnout among collegiate tennis coaches. *Journal of Sport & Exercise Psychology, 21,* 113-130.

Kelley, B.C., & Gill, D.L. (1993). An examination of personal/situational variables, stress appraisal, and burnout in collegiate teacher-coaches. *Research Quarterly for Exercise and Sport, 64,* 94-102.

Kyriacou, C., & Sutcliffe, J. (1978). Teacher stress: Prevalence, sources, and symptoms. *British Journal of Educational Psychology, 48,* 159-167.

Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping.* New York: Springer.

Lazarus, R.S., & Folkman, S. (1991). The concept of coping. In A. Monat & R.S. Lazarus (Eds.), *Stress and coping: An anthology* (3rd ed.), (pp188-206). New York: Columbia University Press.

Learn more about ATCs. (n.d.) Retrieved October 11, 2005, from http://www.nata.org/marketing/learnmore.htm

Maslach, C., & Jackson, S.E. (1981a). The measurement of perceived burnout. *Journal of Occupational Behavior, 2,* 99-113.

Maslach, C., & Jackson, S.E. (1981b). *The Maslach Burnout Inventory* (Research ed.). Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., & Jackson, S.E. (1986). *The Maslach Burnout Inventory* (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.

Maslach, C., Jackson, S.E., & Leiter, M.P. (1996). *Maslach Burnout Inventory Manual* (3rd ed.). Mountain View, CA: Consulting Psychologists Press.

Reed, S., & Giacobbi, P.R. (2004). The stress and coping responses of certified graduate athletic training students. *Journal of Athletic Training, 39,* 193-200.

Rijk, A.E. de, Le Blanc, P.M., Schaufeli, W.B., & Jonge, J. de. (1998). Active coping and need for control as moderators of the job demand-control model: Effects on burnout. *Journal of Occupational and Organizational Psychology, 71,* 1-18.

Sarmiento, T.P., Spence Laschinger, H.K., & Iwasiw, C. (2004). Nurse educators' workplace empowerment, burnout and job satisfaction: testing Kanter's theory. *Journal of Advanced Nursing, 46,* 134-144.

Scherer, R.F., Hwang, C., Yan, W., & Li, J. (2000). The dimensionality of coping among Chinese health care workers. *The Journal of Social Psychology, 140,* 317-328.

Schmitz, N., Neumann, W., & Oppermann, R. (2000). Stress, burnout and locus of control in German nurses. *International Journal of Nursing Studies, 37,* 95-99.

Schuster, N.D., Nelson, D.L., & Quisling, C. (1984). Burnout among physical therapists. *Journal of Physical Therapy, 64,* 299-303.

Smith, R.E. (1984). The dynamics and prevention of stress-induced burnout in athletics. *Primary Care, 11,* 115-127.

Smith, R.E. (1986). Toward a cognitive-affective model of athletic burnout. *Journal of Sport Psychology, 8,* 36-50.

Tanaka, J.K. (2001). *Factors affecting levels of perceived burnout on certified athletic trainers.* Unpublished master's thesis, San Jose State University, San Jose, CA.

Appendix A

San Jose State University Human Subjects Approval Form

San José State
UNIVERSITY

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To: Alise McBrien
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Sunnyvale, CA 94086

From: Pam Stacks, Pam Stacks
AVP, Graduate Studies & Research

Date: October 5, 2005

The Human Subjects-Institutional Review Board has approved your request to use human subjects in the study entitled:

"Burnout and coping among certified athletic trainers in two different high school settings."

This approval is contingent upon the subjects participating in your research project being appropriately protected from risk. This includes the protection of the anonymity of the subjects' identity when they participate in your research project, and with regard to all data that may be collected from the subjects. The approval includes continued monitoring of your research by the Board to assure that the subjects are being adequately and properly protected from such risks. If at any time a subject becomes injured or complains of injury, you must notify Pam Stacks, Ph.D. immediately. Injury includes but is not limited to bodily harm, psychological trauma, and release of potentially damaging personal information. This approval for the human subjects portion of your project is in effect for one year, and data collection beyond October 5, 2006 requires an extension request.

Please also be advised that all subjects need to be fully informed and aware that their participation in your research project is voluntary, and that he or she may withdraw from the project at any time. Further, a subject's participation, refusal to participate, or withdrawal will not affect any services that the subject is receiving or will receive at the institution in which the research is being conducted.

If you have any questions, please contact me at (408) 924-2480.

Cc: David Furst, Ph.D.

Appendix B

San José State
UNIVERSITY

College of Applied Sciences and Arts
Department of Human Performance
One Washington Square
San José, CA 95192-0054
Voice: 408-924-3010
Fax: 408-924-3053

Agreement to Participate in Research

Responsible Investigator: Alise M. McBrien, ATC

Title of Protocol: Human Services Survey

Dear High School or High School/Clinic Certified Athletic Trainer,

To date there is a lack of research on burnout and coping in high school and high school/clinic certified athletic trainers. Thus, I am conducting a comparative study on burnout and coping for high school certified athletic trainers versus high school/clinic certified athletic trainers within the United States in order to gain valuable information which could someday directly help you and your peers.

As a certified athletic trainer in the high school setting, I realize how important your time is. However, completion of this questionnaire could aid in the recognition and prevention of burnout and the common problems related to burnout among high school certified athletic trainers and high school/clinic certified athletic trainers.

You should understand that your participation in this study is voluntary and that choosing not to participate in this study, or in any part of this study, will not affect your relations with San Jose State University. No risks have been anticipated as a result of your participation in this study. The results of this study may be published; however, any information that could result in your identification will remain anonymous. Completion and return of the following questionnaires implies consent to utilize the anonymous information you provide. Please take a few minutes to complete the enclosed questionnaires and return them within three weeks of its arrival in the enclosed self-addressed stamped envelope.

If you have any questions or concerns regarding this study, please feel free to contact me at (714) 654-4914, or Dr. David Furst, Thesis Chair at (408) 924-3039. Complaints about the research may be directed to Dr. Greg Payne, Department Chair, Department of Kinesiology, at (408) 924-3010. Questions or complaints about the research, participants' rights, or research-related injury may be presented to Pamela Stacks, PhD., Associate Vice President of Graduate Studies and Research, at (408) 924-2480.

Sincerely,

Alise M. McBrien, ATC

Alise M. McBrien, ATC
San Jose State University

Appendix C

Maslach Burnout Inventory

Sample Items on the Maslach Burnout Inventory

3. I feel fatigued when I get up in the morning and have to face another day on the job.

16. Working with people directly puts too much stress on me.

How Often:

0 – Never

1 – A few times a year or less

2 – Once a month or less

3 – A few times a month

4 – Once a week

5 – A few times a week

6 – Every day

Appendix D

Ways of Coping Questionnaire

Example Statements on the Ways of Coping Questionnaire

A. I talked to someone to find out more about the situation

B. I criticized or lectured myself

C. I tried not to burn my bridges, but leave things open somewhat

D. I hoped for a miracle

E. I went along with fate; sometimes I just have bad luck

How Often:

0 – Does not apply and/or not used

1 – Used somewhat

2 – Used quite a bit

3 – Used a great deal

Appendix E

Demographic Questionnaire

Please complete the following demographic data sheet as accurately as possible:
Part I:

1. Gender: Male [ ] Female [ ]

2. Age: _____

3. Number of years as a Certified Athletic Trainer (ATC): _____

4. Number of high schools you currently work at as an ATC: _____

5. Current Position at High School(s): Head ATC [ ] Assistant ATC[ ] Other_____

6. Number of years at current position(s): (1)_____ (2)_____ (3)_____ (4)_____ (5)_____

7. Approximate number of hours worked per week at each high school:

(1)_____ (2)_____ (3)_____ (4)_____ (5)_____ **Total:**_____

8. Number of ATCs at current site(s) (**NOT** including yourself):

(1)_____ (2)_____ (3)_____ (4)_____ (5)_____

9. Number of competitive athletes with which you work this season at each site:

(1)_____ (2)_____ (3)_____ (4)_____ (5)_____

10. Total # of athletes this season: _____

11. Previous **paid** positions worked as an ATC and number of years at that position:

Position	Years Worked
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Part II: **(ONLY To be completed by ATCs contracted to HS through a clinic)**

12. Current position at the clinic: _____

13. Type of clinic (e.g., PT, Fitness Training, Pilates, etc.)_____

14. Number of years in current position at the clinic: _____

15. Approx. # of hours worked per week in clinic this season: _____

Total Number of Hours worked per week [clinic + high school(s)]:_____

Appendix F

Sample of Follow-Up Post Card

Just a reminder to all of you who have not yet had a chance to send in your burnout and coping questionnaires. If you have yet to complete and return your questionnaires and still plan to participate in the study, please do so within the next week. Your information is important, and I would appreciate your help. If you have already returned the questionnaires, please disregard this post card. Thank you in advance.

Sincerely,

Alise M. McBrien, ATC